

CLAIMS

What is claimed is:

- See A1*
1. A method of implementing a personal digital assistant comprising a main unit and an option pack comprising the acts of:
 - (a) coupling the option pack with the main unit,
the option pack comprising a first memory device configured to store one or more applications and drivers associated with the one or more applications, and a second memory device configured to store identification data,
the main unit comprising a device manager configured to receive the identification data from the second memory device, a power supply, and a third memory device; and
 - (b) transmitting the identification data from the second memory device to the device manager.
 2. The method of implementing a personal digital assistant, as set forth in claim 1, wherein act (a) comprises coupling the option pack with the main unit via a 100-pin connector.
 3. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the first memory device and the second memory device comprise the same memory device.

4. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the device manager comprises a device driver that controls the interaction between the main unit and the option pack.

5. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the first memory device comprises a flash memory or a read only memory (ROM).

6. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the second memory device comprises an electrically erasable programmable read only memory (EEPROM).

7. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the identification data comprises option pack feature information, option pack configuration, and option pack identification.

8. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the identification data comprises option pack identification information, control information, a driver table, and option pack configuration.

9. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the identification information comprises a bootstrap program.

10. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the identification information comprises original equipment manufacturer (OEM) information.

11. The method of implementing a personal digital assistant, as set forth in claim 1, wherein act (b) comprises the act of transmitting the identification data through a serial interface.

12. The method of implementing a personal digital assistant, as set forth in claim 11, wherein act (b) comprises the acts of:

- (a) enabling the serial interface;
- (b) enabling the power supply to transmit power to the option pack; and
- (c) transmitting the identification data from the second memory device to the device manager wherein the option pack only draws a minimal amount of current from the main unit.

13. The method of implementing a personal digital assistant, as set forth in claim 10, wherein act (c) comprises the act of transmitting the identification data wherein the option pack draws 5.0 mA – 15.0 mA of current from the main unit.

14. The method of implementing a personal digital assistant, as set forth in claim 1, comprising the act of determining whether the power supply in the main unit has enough power to activate the option pack fully.

15. The method of implementing a personal digital assistant, as set forth in claim 1, comprising the act of determining whether the third memory device on the main unit has enough memory capacity to receive the applications and associated drivers stored on the second memory device of the option pack.

16. The method of implementing a personal digital assistant, as set forth in claim 1, wherein the second memory comprises location and identification information of the applications and drivers available on the option pack.

17. A method of inserting an option pack into a main unit of a personal digital assistant (PDA), comprising the acts of:

- (a) powering-on the main unit;
- (b) determining whether there is an option pack coupled to the main unit;
- (c) providing an interrupt signal from the option pack to the main unit;
- (d) interrupting the processing of the main unit;
- (e) notifying the main unit that the option pack is present; and
- (f) transmitting identification information from the option pack to the main unit.

18. The method, as set forth in claim 17, comprising the act of determining whether the main unit has enough power to enable the option pack.

19. The method, as set forth in claim 18, comprising the act of notifying a user as to whether the main unit has enough power to enable the option pack.

20. The method, as set forth in claim 17, comprising the act of determining whether the main unit has enough memory to store the applications and drivers available on the option pack.

21. The method, as set forth in claim 20, comprising the act of notifying a user as to whether the main unit has enough memory to store the applications and drivers available on the option pack.

22. The method, as set forth in claim 17, wherein act (d) comprises the act of interrupting the main unit with one or more detect signals.

23. The method, as set forth in claim 22, wherein the detect signals initiate a timer to allow the detect signals to debounce.

24. An option pack interface comprising:
a memory device comprising a memory data structure configured to store identification data; and
at least one data sector defined within the memory data structure.

25. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises option pack identification data.

26. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises driver control information.

27. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises a driver table.

28. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises option pack configuration information.

29. The option pack interface, as set forth in claim 28, wherein the option pack configuration information comprises information correlating to battery capacity of the option pack.

30. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises a bootstrap program.

31. The option pack interface, as set forth in claim 24, wherein the at least one data sector comprises original equipment manufacturer (OEM) information.